

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously presented) In a data communication network supporting data compression, a method for optimizing compression efficiency, comprising:

filtering protocol-specific header and control information of a protocol data unit (PDU) to determine compressibility of the contents of said protocol data unit including determining if a given protocol data unit is associated with a previously filtered protocol data unit;

based on the result of said filtering, selecting the state of data link compression for said protocol data unit to optimize compression efficiency such that if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected; and

associating the selected state of data link compression with the protocol data unit to control a compression process adapted to compress contents of protocol data units.

2. (Original) The method as claimed in claim 1, further including

compressing the contents of the protocol data unit as a function of the state of data link compression.

3. (Original) The method as claimed in claim 2, wherein compressing the contents of the protocol data unit includes applying an indication in or with the compressed protocol data unit to indicate whether the contents of the protocol data unit have been compressed.

4. (Original) The method as claimed in claim 3, further including decompressing the compressed contents of the protocol data unit.

5. (Original) The method as claimed in claim 4, wherein, based on the indication of whether the contents of the protocol data unit have been compressed, decompressing the compressed contents of the protocol data unit is performed in a manner previously negotiated.

6. (Original) The method as claimed in claim 1, further including accessing a table having entries with specific media types deemed compression limited.

7. (Original) The method as claimed in claim 1, wherein filtering

includes associating individual protocol data units to a specific media type.

8. (Cancelled)

9. (Previously Presented) The method as claimed in claim 1, wherein determining includes accessing a table including information of previously filtered protocol data units.

10. (Original) The method as claimed in claim 1, wherein selecting the state of the data link compression includes disabling the data link compression if the compressibility of the contents of the protocol data unit is determined to be low.

11. (Original) The method as claimed in claim 1, wherein selecting the state of the data link compression includes enabling the data link compression if the compressibility of the contents of the protocol data unit is determined to be high.

12. (Original) The method as claimed in claim 1, further including initializing a table used by the data link compression with data patterns expected to be contained in the content of said protocol data unit.

13. (Currently Amended) In a data communication network supporting

data compression, an apparatus for optimizing compression efficiency, comprising:

~~a filter of protocol-specific header and control information of a~~ protocol data unit (PDU) filter configured to determine compressibility of the contents of ~~said a~~ given protocol data unit by including determining if the a given protocol data unit is associated with a previously filtered protocol data unit; and

a selector coupled to the output of the filter and configured ~~to~~ (i) to select the state of data link compression for the protocol data unit to optimize compression efficiency such that if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected; and (ii) to associate the selected state of data link compression with the protocol data unit to control a compressor adapted to compress contents of protocol data units.

14. (Previously Amended) The apparatus as claimed in claim 13, further including a compressor configured to compress the contents of the protocol data unit responsive to the state of data link compression.

15. (Previously Amended) The apparatus as claimed in claim 14, wherein the compressor is configured to include an indication in or with the compressed protocol data unit to indicate whether the contents of the protocol data unit have been compressed.

16. (Previously presented) The apparatus as claimed in claim 15, further including a decompressor configured to decompress the compressed contents of the protocol data unit.

17. (Previously presented) The apparatus as claimed in claim 16, wherein, the decompressor is configured to decompress the contents of the protocol data unit in a manner previously negotiated with the compressor based on the indication of whether the contents of the protocol data unit have been compressed.

18. (Currently Amended) The apparatus according to claim 13, wherein;

the filter is configured to determine compressibility of the contents of the given protocol data unit by determining the type of data of the given protocol data unit where the given protocol data unit is not associated with a previously filtered protocol data unit; and

the selector is configured to select the state of data link compression for the given protocol data unit based on the determined type of data of the given protocol data unit if the given protocol data unit is not associated with a previously filtered protocol data unit and includes a table configured to store entries with specific media types deemed compression limited.

19. (Previously presented) The apparatus as claimed in claim 13, wherein the filter is configured to associate individual protocol data units to a specific media type.

20. (Previously presented)) The apparatus as claimed in claim 19, wherein the filter further includes a tracking unit to determine if a given protocol data unit is associated with a previously filtered protocol data unit.

21. (Previously presented)) The apparatus as claimed in claim 20, wherein the filter further includes a table configured to store information of previously filtered protocol data units.

22. (Previously presented)) The apparatus as claimed in claim 13, wherein the selector is configured to disable the compressor if the compressibility of the contents of the protocol data unit is determined to be low.

23. (Previously presented)) The apparatus as claimed in claim 13, wherein the selector is configured to enable the compressor if the compressibility of the contents of the protocol data unit is determined to be high.

24. (Previously presented)) The apparatus as claimed in claim 13, further including an initialization unit configured to initialize a table used by the compressor with data patterns expected to be contained in the content of said protocol data unit.

25. (Currently Amended) In a data communication network supporting data compression, an apparatus for optimizing compression efficiency, comprising:

means for filtering protocol-specific header and control information of a protocol data unit to determine compressibility of the contents of said protocol data units including;

means for determining if a given protocol data unit is associated with a previously filtered protocol data unit; and

means for determining the type of data of the given protocol data unit where the given protocol data unit is not associated with a previously filtered protocol data unit;

means for selecting the state of data link compression for said protocol data unit based on the results of said filtering to optimize compression efficiency such that;

if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected; and

otherwise the state of data link compression is selected based on the determined type of data of the given protocol data unit; and

means for associating the selected state of data link compression with the protocol data unit to control a compression process adapted to compress contents of protocol data units.

26. (Original) The apparatus as claimed in claim 25, further including means for compressing the contents of the protocol data unit based on the state of data link compression.

27. (Original) The apparatus as claimed in claim 26, further including means for decompressing the contents of the protocol data unit in a manner previously negotiated with the compressor.

28. (Currently Amended) A computer-readable medium having stored thereon sequences of instructions, the sequences of instructions including instructions, when executed by a processor, configured to cause the processor to perform:

filtering protocol-specific header and control information of a protocol data unit to determine compressibility of the contents of said protocol data unit including;



determining if a given protocol data unit is associated with a previously filtered protocol data unit; and

determining the type of data of the given protocol data unit where the given protocol data unit is not associated with a previously filtered protocol data unit;

selecting the state of data link compression for said protocol data unit based on the results of said filtering to optimize compression efficiency such that;

if the given protocol data unit is associated with a previously filtered protocol data unit, the data link compression for the previously filtered protocol data unit is selected; and

otherwise the state of data link compression is selected based on the determined type of data of the given protocol data unit; and

associating the selected state of data link compression with the protocol data unit to control a compression process adapted to compress contents of protocol data units.

29. (Currently Amended) In a data communication network supporting data compression, a method for optimizing compression efficiency, comprising:

without changes to a subordinate protocol layer or changes to the higher protocol layers carried by a given protocol data unit, selectively controlling the state of a compression algorithm based on a protocol-specific header and control

information of the given protocol data unit or a compressibility determination of a protocol data unit associated with the given protocol data unit to determine compressibility for compressing data transported by protocol data unit across a connection in the data communication network to optimize the compression efficiency such that if a compressibility determination of a protocol data unit associated with the given protocol data unit is provided, the same compressibility determination is made for the given protocol data and if a compressibility determination of a protocol data unit associated with the given protocol data unit is not provided, the compressibility determination is made for the given protocol data based on the protocol-specific header and control information.

30. (Original) The method as claimed in claim 29, wherein selectively controlling the state of the compression algorithm enables or disables the compression algorithm.

31. (Original) The method as claimed in claim 29, wherein selectively controlling the state of the compression algorithm includes analyzing protocol-specific header and control information of the protocol data units of the higher protocol layers.

32. (new) The method of claim 1 wherein:

the filtering protocol-specific header and control information of a protocol

data unit (PDU) to determine compressibility of the contents of said protocol data unit includes determining the type of data of the given protocol data unit where the given protocol data unit is not associated with a previously filtered protocol data unit; and

the selecting the state of data link compression for said protocol data unit to optimize compression efficiency is performed such that the state of data link compression is selected based on the determined type of data of the given protocol data unit if the given protocol data unit is not associated with a previously filtered protocol data unit.